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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,572	09/27/2006	Tamotsu Yamamoto	2006_1635A	6597

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WENDEROTH, LIND & PONACK, L.L.P.
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EXAMINER

YABUT, DANIEL D

ART UNIT	PAPER NUMBER
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3656

NOTIFICATION DATE	DELIVERY MODE
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08/20/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ddalecki@wenderoth.com
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Office Action Summary	Application No. 10/594,572	Applicant(s) YAMAMOTO ET AL.	
	Examiner DANIEL YABUT	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 5-10, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 11-15, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/27/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, Species II corresponding to **claims 1-4, 11-15, 18 and 19** in the reply filed on 7/26/2010 is acknowledged. The traversal is on the ground(s) that Species I (Figures 1-4) merely illustrates generic subject matter. This is not found persuasive because Figures 1-4 clearly show the plurality of grooves being formed in a shape (rectangular) that is substantially different from Species II-IV in that they are not circular, triangular or trapezoidal. Therefore, Figures 1-4 is indeed directed to a mutually exclusive characteristic not incorporated in the Species I-IV. Further traversal is on the grounds that there is a lack of undue burden.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 11-15, 18 and 19 rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto (JP Patent 2003184994 A).

Yamamoto discloses a rotating assembly (Fig. 1) I which a rotating member is fixed onto a shaft (10) by inserting the shaft into an inner hole (near 24; Fig. 3) of the rotating member, the rotating assembly comprising a(n):

Art Unit: 3656

Re claim 1

- Diameter of the inner hole is formed smaller than an outer diameter of an insertion portion of the shaft (para. [0015] / L1-6 in English translation), and a plurality of grooves (24) extending in the insertion direction are formed on one of the inner hole and an outer circumferential surface of the shaft
- Shaft is inserted into the inner hole and cooled to reduce the diameter of the inner hole again, the other of the inner hole and the outer circumferential surface of the shaft is pressed and raised by the other part and enters the grooves so that both of them are fixed and formed after the diameter of the inner hole is expanded by heating the rotating member (para. [0017]) **Note:** *Regarding this limitation, the MPEP states, "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process". See MPEP 2113.*

Re claim 2

- Rotating member is a cam piece (20) having a circumferential-shaped outer circumferential surface surrounding the inner hole (at 20 ; Fig. 3) and a cam profile continuing the outer circumferential surface and projecting outward, the plurality of grooves (24) are formed in the inner hole, and by inserting the driving shaft into the inner hole, **the cam piece is fastened onto the inner hole so as to form a camshaft (Fig. 1).**

Art Unit: 3656

Re claim 3

- Portion in the inner hole positioned inward of the location where the circumferential-shaped outer circumferential surface continues to the cam profile (near 24; Fig. 3), a large-diameter escape portion (24) is formed to prevent contact with the outer circumferential surface of the driving shaft when the cam piece is fastened to the driving shaft.

Re claim 11

- Shaft having an insertion portion (near 11; Fig. 4), wherein the insertion portion includes an outer diameter (at 10; Fig. 4)
- Rotating member having an inner hole (near 24; Fig. 3), wherein the inner hole includes a diameter that is smaller than the outer diameter of the insertion portion, further wherein the rotating member is fixed onto the shaft by inserting the shaft into the inner hole of the rotating member (para. [0015] / L1-6 in English translation)
- Plurality of grooves (24) extending in the insertion direction, wherein the plurality of grooves are positioned on at least one of the inner hole and an outer circumferential surface of the shaft
- Shaft is inserted into the inner hole and cooled to reduce the diameter of the inner hole again, wherein the plurality of grooves are pressed into the shaft so that both of the inner hole and outer circumferential surface are fixed and formed after the diameter of the inner hole is expanded by heating the rotating member (para. [0017])

Note: Regarding this limitation, the MPEP states, “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If

Art Unit: 3656

the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process". See MPEP 2113.

Re claim 12

- Plurality of grooves (24) are formed on the inner hole.

Re claim 13

- Rotating member is a cam piece (20) having a cam profile continuing to the outer circumferential surface and projecting outward, and by inserting the shaft into the inner hole, the cam piece is fastened onto the inner hole so as to form a camshaft (Fig. 3)

Re claim 14

- Portion in the inner hole positioned inward of the location where the circumferential-shaped outer circumferential surface continues to the cam profile, a large-diameter escape portion (25) is formed to prevent contact with the outer circumferential surface of the driving shaft when the cam piece is fastened to the driving shaft.

Re claim 18

- Each of the plurality of grooves is formed in a trapezoidal shape (at 24A; para. [0015] / L14).

Re claim 19

- Plurality of grooves are structured to be at least one of a trapezoidal shape, a circular shape, and a triangular shape (at 24A; para. [0015] / L14).

Claim Rejections - 35 USC § 103

3. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (JP Patent 2003184994 A) in view of Arnold et al. (US Patent 5,207,120).

Yamamoto discloses all of the claim limitations, see above, but does **not** expressly disclose the hardness of the inner hole of the cam piece being higher than the hardness of the outer circumferential surface of the driving shaft.

Arnold et al. teaches the use of the hardness of the inner hole of the cam piece being higher than the hardness of the outer circumferential surface of the driving shaft (C4 / L49-55) for the purpose of assuring that the insertion portion conforms with the inner hole upon installation (C4 / L52-53).

It would have been obvious to one having ordinary skill in the art at the time of the invention to provide the hardness of the inner hole of the cam piece being higher than the hardness of the outer circumferential surface of the driving shaft, as taught by Arnold et al., in the device of Yamamoto for the purpose of assuring that the insertion portion conforms with the inner hole upon installation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL YABUT whose telephone number is (571)270-5526. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M. EST.

Art Unit: 3656

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard W. Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL YABUT/
Examiner, Art Unit 3656
8/9/2010

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3656